

REMARKS

This document is submitted in response to the final office action of December 14, 2010 ("Office Action").

Applicants have amended claim 14 to incorporate the limitations of claim 45, and also to limit the slurry recited therein to one containing 10% rice flour. Support for a slurry containing 10% rice flour appears throughout the specification, e.g., at page 5, line 29. Finally, Applicants have amended claim 19, which depends from claim 14, to limit the fermentation product to wine. In view of the above amendments, Applicants have canceled claims 15, 16, 18, 20, 32-34, 36, 45, 47, 48, and 53-56 without prejudice.

Applicants submit that the proposed amendments have place the claims into condition for allowance.

In any event, Applicants further submit that the amendments have not raised any new issue or require any additional searching. They at least present the rejected claims in better form for consideration on appeal, and should therefore be entered after the final rejection under 37 C.F.R. § 1.116. No new matter has been introduced.

Upon entry of the above amendments, claims 14, 19, 31, and 35 will be pending. Applicants respectfully request that the Examiner review the following remarks and reconsider this application.

Telephone Interview

Applicants thank the Examiner for conducting a telephone conference with their counsel on January 25, 2011, to discuss the obviousness rejection set forth in the office action. The substance of the conference is essentially as described in the Examiner's Interview Summary dated January 28, 2011.

Rejection under 35 U.S.C. § 103

The Examiner maintains, for the same reasons set forth in the office action dated July 14, 2010 ("last office action"), that claims 14-16, 18-20, 31-36, 45, 47, 48 and 53-56 are obvious over Shaw et al. ("Shaw") in view of Seidman et al. ("Seidman"), Jones et al. ("Jones"), Nutrient Facts on Glutinous Rice ("Nutrient Facts"), Javabainen et al.

("Javabainen"), and Skory et al. ("Skory"). Applicants note that claims 15, 16, 18, 20, 32-34, 36, 45, 47, 48, and 53-56 have been canceled.

For the purpose of expediting prosecution of this application, Applicants have amended claim 14 to cover a method for producing a fermentation product from a slurry containing 10% rice flour. The slurry is treated by the specific steps recited in the claim to obtain a glucose-rich syrup containing either 105 mg/ml or 114 mg/ml glucose. *Aspergillus oryzae* is then grown in the glucose-rich syrup as is for three days to produce a fermentation product containing 10.5% ethanol, or for five days to produce a fermentation product containing 13.5% ethanol.

According to the Examiner, Shaw and Seidman combined would have led a skilled practitioner to a glucose-rich syrup, and Jones, Nutrient Facts, Javabainen, and Skory would have further led him or her to grow *Aspergillus oryzae* in the syrup to produce a fermentation product. See the last office action, pages 7-8. However, the Examiner also acknowledges that the cited references do **not** disclose growing *Aspergillus oryzae* in the glucose-rich syrup specified in amended claim 14 to obtain a fermentation product containing 10.5% or 13.5% ethanol. See the last office action, page 9, second paragraph. Thus, the cited references would not have led a skilled practitioner to use the specific syrup to obtain the fermentation product recited in claim 14. In other words, the Examiner has not established a *prima facie* case of obviousness against amended claim 14.

Indeed, even assuming that a *prima facie* case of obviousness has been established, Applicants submit that the high ethanol concentration yielded by the claimed method, i.e., **10.5% or 13.5%**, presents an **unexpected** result sufficient to overcome such a case.

Applicants first note that none of Shaw, Seidman, Jones, and Nutrient Facts even mentions growing microorganisms. Javabainen describes growing *Lactobacillus amylovorus* in a barley medium to produce lactic acid. See, e.g., the summary. Thus, none of these five references provide any information regarding growing *Aspergillus oryzae* to produce ethanol.

The sixth reference, Skory, teaches that *Aspergillus oryzae* produces **1.59-2.44 %** ethanol in a **6-day** fermentation period, using 50 g/L of glucose as the carbon source. See Table 1 at page 204. To simplify discussion, Applicants assume that ethanol production is proportional to the concentration of the carbon source. Thus, according to Skory, using *Aspergillus oryzae* to ferment glucose at a concentration of 100 mg/ml (close to that required by amended claim 14) in **6 days** would produce **at best 4.88 %** ethanol. This ethanol concentration is far lower than that produced by the method of amended claim 14, i.e., **10.5% in 3 days** or **13.5% in 5 days**. Based on the explicit disclosures of Skory and what a skilled person would reasonable infer from them, the high ethanol concentration in the fermentation product produced by the claimed method is **unexpected**.

Put differently, even assuming that the claimed method is a combination of known steps, the combination led to an **unpredictable** result. As set forth in MPEP § 2141, “[w]hen considering obviousness of a combination of known elements, the operative question is [] ‘whether the **improvement is more than the predictable** use of prior art elements according to their established functions;’” citing *KSR v. Teleflex*, 127 S. Ct. 1727, 1740. Accordingly, amended claim 14 is not obvious over Shaw, Seidman, Jones, Nutrient Facts, Javabainen, and Skory, individually or combined. By the same token, neither are claims 19, 31, and 35, all of which depend from claim 14.

Applicants respectfully request reconsideration and withdrawal of this obviousness rejection.

CONCLUSION

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment.

In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed.

Applicant(s) : Jei-Fu Shaw et al.
Serial No. : 10/782,287
Filed : February 19, 2004
Page : 7 of 7

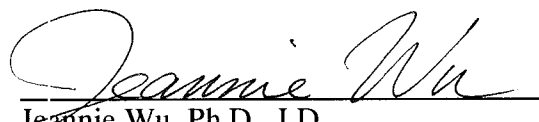
Attorney Docket No.: 70002-104001
Client Ref. No.: 09A-911128

Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

No fees are believed due. Please apply any other charges or credits to Deposit Account No. 50-4189, referencing Attorney Docket No. 70002-104001.

Respectfully submitted,

Date: March 14, 2011


Jeannie Wu, Ph.D., J.D.
Attorney at Law
Reg. No. 56,265

Customer No. 69713
Occhiuti Rohlicek & Tsao LLP
10 Fawcett Street
Cambridge, MA 02138
Telephone: (617) 500-2538
Facsimile: (617) 500-2499